IN THE CLAIMS:

Please re-write the claims as follows:

Please cancel Claims 6 – 29 without prejudice.

1. (Currently Amended) A method for establishing identity in a file system, ~~distributing and caching metadata related to files maintained in a file system,~~ comprising ~~the steps of~~:

     receiving a file request concerning an indicated file from a client, the request received by a proxy;

     forwarding the request from the proxy to a file server;

     returning a reply associated with the file request from the file server to the proxy;

     inserting, by the proxy, metadata into the file handle; and

     sending, by the proxy, the file handle with the metadata inserted in the file handle to the client, the metadata to be used in further requests to identify the client and the indicated file .

     ~~exchanging any of files, objects, and file, object-related information between a file server and a client via an intermediary device; and~~

     ~~using file handles to convey the cached metadata for use by said intermediary device and said client.~~

2. (Currently Amended) The method of Claim 1, further comprising ~~the step of~~:

2

² using ~~said~~ the metadata in ~~said~~ the file handles for any of eliminating a need for

³ ~~said~~ the proxy ~~intermediary device~~ to generate additional requests to ~~said~~ the server to

⁴ establish file identity, and for completing client requests.

¹ 3. (Currently Amended) The method of Claim 1, further comprising ~~the step of~~:

² ~~using said intermediary device to encode~~

³ <u>encoding</u> metadata in ~~the~~ <u>a</u> form of a session key into ~~said~~ <u>the</u> file handle<u>, the session key</u>

⁴ <u>expiring</u> ~~that expires~~ after a predetermined amount of time.

¹ 4. (Currently Amended) The method of Claim 1, <u>further comprising:</u>

² ~~wherein said file system is~~

³ <u>using</u> an NFS file system <u>as the file system</u>.

¹ 5. (Currently Amended) The method of Claim 1, <u>further comprising:</u>

² ~~wherein said file system uses~~

³ <u>using</u> a stateless protocol <u>by the file system</u>.

6-29 (Cancelled)

Please add new claims 30, *et seq.* as follows:

1   30. (New) The method of claim 1, further comprising:

2   sending another file request by the client to the server;

3   including the metadata in a further file handle sent with the another request;

4   receiving the another request by the proxy;

5   identifying, in response to the metadata, the client as permitted to submit the an-

6   other file request;

7   sending the another request to the file server and not sending the metadata with

8   the another file handle to the file server; and

9   receiving by the proxy the further reply from the file server, and sending by the

10   proxy the further reply to the client.

1   31. (New) A method for establishing identity in a file system, comprising:

2   receiving a first file request concerning an indicated file from a client, the first file

3   request received by a proxy;

4   forwarding the first file request from the proxy to a file server;

5   returning a reply associated with the first file request from the file server to the

6   proxy;

7   inserting, by the proxy, metadata into the file handle;

8   sending, by the proxy, the file handle with the metadata inserted in the file handle

9   to the client, the metadata to be used in further requests to identify the client and the indi-

10   cated file;

11   sending a second file request by the client to the server;

12   including the metadata in a second file handle sent with the second file request;

13   receiving the second file request by the proxy;

14   identifying, in response to the metadata, that the client as permitted to submit the

15   second file request;

16   sending the second file request to the file server and not sending the metadata

17   with the second file handle to the file server; and

18   receiving by the proxy a second reply from the file server, and sending by the

19   proxy the second reply to the client.

1   32.   (New) An apparatus to establish identity in a file system, comprising:

2   a proxy to receive a file request sent by a client to a file system, the proxy to for-

3   ward the request to a file server;

4   the file server to return a reply associated with the file request to the proxy;

5   the proxy to insert metadata into the file handle; and

6   the proxy to send the file handle with the metadata inserted in the file handle to

7   the client, the metadata to be used in further requests to identify the client and the indi-

8   cated file.

33. (New) The apparatus as in claim 32, further comprising:

the client to send another file request to the server, the client to include the meta-

data in a further file handle sent with the another request;

the proxy to receive the another request, the proxy to identify, in response to the

metadata, the client as permitted to submit the another file request, and the proxy to send

the another request to the file server and not to send the metadata with the another file

handle to the file server; and

the proxy to receive a further reply from the file server, and the proxy to send the

further reply to the client.

34. (New) The apparatus of Claim 32, further comprising:

the proxy to use the metadata in the file handle received from the client to elimi-

nate a need for additional communication with the file server to establish file identity.

35. (New) The apparatus of Claim 32, further comprising:

the proxy to encode the metadata in a form of a session key into the file handle,

the session key expiring after a predetermined amount of time.

36. (New) The apparatus of Claim 32, further comprising:

an NFS file system used as the file system.

37. (New) The apparatus of Claim 32, further comprising:

2   a stateless protocol used by the file system.

1   38. (New) A computer readable media, comprising:

2   said computer readable media containing instructions for execution on a processor

3 for a method of establishing identity in a file system, the method having,

4   receiving a file request concerning an indicated file from a client, the request re-

5 ceived by a proxy;

6   forwarding the request from the proxy to a file server;

7   returning a reply associated with the file request from the file server to the proxy;

8   inserting, by the proxy, metadata into the file handle; and

9   sending, by the proxy, the file handle with the metadata inserted in the file handle

10 to the client, the metadata to be used in further requests to identify the client and the indi-

11 cated file.

1   39. (New) A method for establishing identity in a file system, comprising:

2   receiving a first file request concerning an indicated file from a client, the first file

3 request received by a proxy;

4   forwarding the first file request from the proxy to a file server;

5   permitting the request to be acted upon by the file system in response to a prede-

6 termined protocol;

7   returning a reply associated with the first file request from the file server to the

8 proxy;

9   inserting, by the proxy, a session key into the file handle; and

10   sending, by the proxy, the file handle with the session key inserted in the file han-

11   dle to the client, the session key to be used in further requests to identify the client and

12   the indicated file;

1   40. (New) The method according to claim 39, further comprising:

2   sending a second file request by the client to the server;

3   including the session key in a second file handle sent with the second file request;

4   receiving the second file request by the proxy;

5   identifying, in response to the session key, that the client as permitted to submit

6   the second file request;

7   sending the second file request to the file server and not sending the session key

8   with the second file handle to the file server; and

9   receiving by the proxy a second reply from the file server, and sending by the

10   proxy the second reply to the client.

1   41. (New) The method according to claim 39, further comprising:

2   causing the session key to expire after a selected amount of time.

1   42. (New) The method according to claim 39, further comprising:

2   causing the session key to expire after a selected amount of usage.

43. (New) The method according to claim 39, further comprising:

using a NFS protocol as the predetermined protocol.

44. (New) The method according to claim 39, further comprising:

using as the predetermined protocol a two way communication exchange between the proxy and the file server.

45. (New) An apparatus to establish identity in a file system, comprising:

a proxy to receive a file request sent by a client to a file system, the proxy to forward the request to a file server;

the file server to return a reply associated with the file request to the proxy;

the proxy to insert a session key into the file handle; and

the proxy to send the file handle with the session key inserted in the file handle to the client, the session key to be used in further requests to identify the client and the indicated file.

46. (New) The apparatus as in claim 45, further comprising:

the client to send another file request to the server, the client to include the session key in a further file handle sent with the another request;

the proxy to receive the another request, the proxy to identify, in response to the metadata, the client as permitted to submit the another file request, and the proxy to send

6   the another request to the file server and not to send the session key with the another file

7   handle to the file server; and

8   the proxy to receive a further reply from the file server, and the proxy to send the

9   further reply to the client.

1   47. (New) The apparatus of Claim 45, further comprising:

2   the proxy to use the metadata in the file handle received from the client to elimi-

3   nate a need for additional communication with the file server to establish file identity.

1   48. (New) The apparatus of Claim 45, further comprising:

2   the proxy to encode the metadata in a form of a session key into the file handle,

3   the session key expiring after a predetermined amount of time.

1   49. (New) The apparatus of Claim 45, further comprising:

2   an NFS file system used as the file system.

1   50. (New) The apparatus of Claim 45, further comprising:

2   a stateless protocol used by the file system.

1   51. (New) An apparatus to establish identity in a file system, comprising:

2   a proxy to receive a first file request sent by a client to a file system, the proxy to

3   forward the first file request to a file server;

4 the file server to return a reply associated with the first file request to the proxy;

5 the proxy to insert a session key into a file handle;

6 the proxy to send the file handle with the session key inserted in the file handle to

7 the client, the session key to be used in a second file request to identify the client and the

8 indicated file;

9 the client to send a second file request to the server, the client to include the ses-

10 sion key in a second file handle sent with the second file request;

11 the proxy to receive the second file request, and the proxy to identify, in response

12 to the session key, the client as permitted to submit the second file request, and the proxy

13 to send the second file request to the file server and not to send the session key with the

14 second file handle to the file server; and

15 the proxy to receive a second reply from the file server, and the proxy to send the

16 second reply to the client.

1 52. (New) A method for establishing identity in a file system, comprising:

2 receiving a first file request concerning an indicated file from a client, the first file

3 request received by a proxy;

4 forwarding the first file request from the proxy to a file server;

5 permitting the request to be acted upon by the file system in response to a prede-

6 termined protocol;

7 returning a reply associated with the first file request from the file server to the

8 proxy;

9   inserting, by the proxy, a cryptographic information into the file handle;

10   sending, by the proxy, the file handle with the cryptographic information inserted

11 in the file handle to the client, the cryptographic information to be used in further re-

12 quests to identify the client and the indicated file.

1   53. (New) The method according to claim 52, further comprising:

2   sending a second file request by the client to the server;

3   including the cryptographic information in a second file handle sent with the sec-

4   ond file request;

5   receiving the second file request by the proxy;

6   identifying, in response to the cryptographic information, that the client as permit-

7   ted to submit the second file request;

8   sending the second file request to the file server and not sending the cryptographic

9   information with the second file handle to the file server; and

10   receiving by the proxy a second reply from the file server, and sending by the

11 proxy the second reply to the client.

1   54. (New) The method according to claim 52, further comprising:

2   causing the cryptographic information to expire after a selected amount of time.

1   55. (New) The method according to claim 52, further comprising:

2   causing the cryptographic information to expire after a selected amount of usage.

56. (New) The method according to claim 52, further comprising:

using a NFS protocol as the predetermined protocol.

57. (New) The method according to claim 52, further comprising:

using as the predetermined protocol a two way communication exchange between the proxy and the file server.

58. (New) An apparatus to establish identity in a file system, comprising:

a proxy to receive a file request sent by a client to a file system, the proxy to forward the request to a file server;

the file server to return a reply associated with the file request to the proxy;

the proxy to insert a cryptographic information into the file handle; and

the proxy to send the file handle with the cryptographic information inserted in the file handle to the client, the cryptographic information to be used in further requests to identify the client and the indicated file.

59. (New) The apparatus as in claim 58, further comprising:

the client to send another file request to the server, the client to include the cryptographic information in a further file handle sent with the another request;

the proxy to receive the another request, the proxy to identify, in response to the metadata, the client as permitted to submit the another file request, and the proxy to send

6   the another request to the file server and not to send the cryptographic information with

7   the another file handle to the file server; and

8   the proxy to receive a further reply from the file server, and the proxy to send the

9   further reply to the client.

1   60. (New) The apparatus of Claim 58, further comprising:

2   the proxy to use the metadata in the file handle received from the client to elimi-

3   nate a need for additional communication with the file server to establish file identity.

1   61. (New) The apparatus of Claim 58, further comprising:

2   the proxy to encode the metadata in a form of a cryptographic information into the

3   file handle, the cryptographic information expiring after a predetermined amount of time.

1   62. (New) The apparatus of Claim 58, further comprising:

2   an NFS file system used as the file system.

1   63. (New) The apparatus of Claim 58, further comprising:

2   a stateless protocol used by the file system.

1   64. (New) An apparatus to establish identity in a file system, comprising:

2   a proxy to receive a first file request sent by a client to a file system, the proxy to

3   forward the first file request to a file server;

4   the file server to return a reply associated with the first file request to the proxy;

5   the proxy to insert a cryptographic information into a file handle;

6   the proxy to send the file handle with the cryptographic information inserted in

7 the file handle to the client, the cryptographic information to be used in a second file re-

8 quest to identify the client and the indicated file;

9   the client to send a second file request to the server, the client to include the cryp-

10 tographic information in a second file handle sent with the second file request;

11   the proxy to receive the second file request, and the proxy to identify, in response

12 to the cryptographic information, the client as permitted to submit the second file request,

13 and the proxy to send the second file request to the file server and not to send the crypto-

14 graphic information with the second file handle to the file server; and

15   the proxy to receive a second reply from the file server, and the proxy to send the

16 second reply to the client.